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Lesson 7: Analyzing Data and Using Performance Information



Learning Objectives

1. Understand the importance of data analysis and utilization
2. Be able to use different approaches for data analysis
3. Understand various techniques of presenting data



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How can we Enhance Utilization-Focused Monitoring and Evaluation

- According to Patton (1997) , utilization-focused evaluations or monitoring in this case begins with quote:

“the premise that evaluations (or monitoring) should be judged by their utility and actual use; therefore, evaluators should facilitate the evaluation process and design any evaluation with careful consideration of how everything that is done, from beginning to end, will affect use.”

- Michael Quinn Patton, 1997; Utilization-Focused Evaluation:



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We Use Performance Information to...

PLAN

Inform development of mid- to long-term strategies

Inform design of specific activities.

MANAGE

- Move resources to the most effective (or more promising) project activity.
- Identify (and adjust) poorly performing components of projects.



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We Use Performance Information to...

COMMUNICATE AND REPORT

Share information about project implementation and performance with host government counterparts, other donors, in-country NGOs, and USAID colleagues.

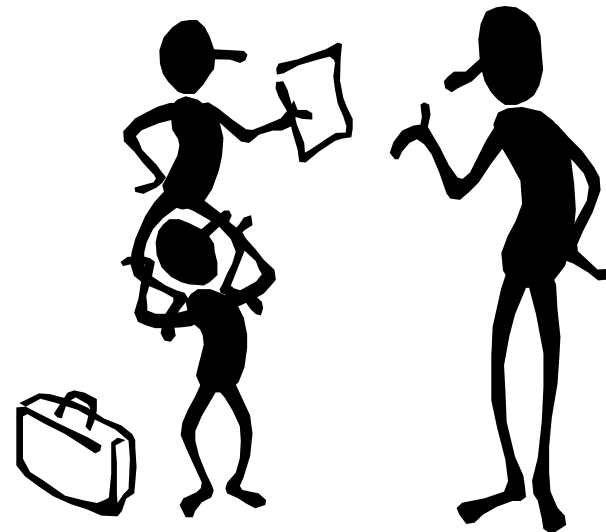
FACILITATE LEARNING

- Trigger evaluation and evaluation activities.
- Point to lessons learned that are relevant to and beyond specific project.



We Use Performance Information to...

For all of these functions the project manager must analyze data and use information to make decisions. Information on performance should be central to the project manager's considerations.





We Use Performance Information to...

Data, by themselves, do not usually help us make decisions or communicate and report effectively

Data + Analysis = **Information**

Information is what we are after

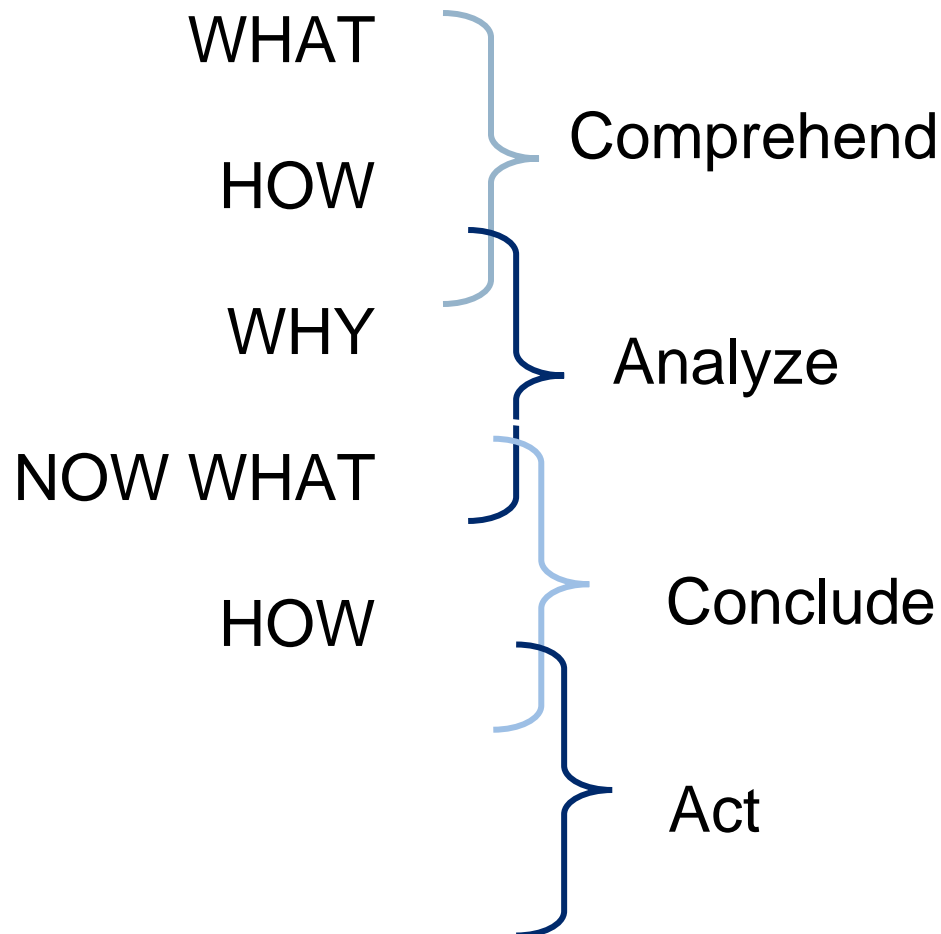


A Simple Set of Questions to Structure Data Analysis and Use

- **WHAT** is the level of project performance?
- **HOW** does performance compare to expectations?
- **WHY** is the project performing above or below expectations?
- **NOW WHAT** decisions should we make?
- **HOW** do we put our decisions in place?



A Simple Set of Questions to Structure Data Analysis and Use





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Just a Reminder - Analysis for Management is NOT Analysis for Research

- A smaller and more targeted set of questions
- Analysis focuses on potential decisions or actions
- Emphasis on relatively simple analytic techniques (elegant = simple but useful)



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And Also Remember to Consider Data Quality Whenever Conducting Data Analysis...

- Do the data appear reasonable and consistent with informed expectations?
- Do the data appear to be “consistent” over time? If there are dramatic variances, are there good explanations?
- Are the data consistent with similar data from other sources, or related data from the same source?



Let's Get Started...





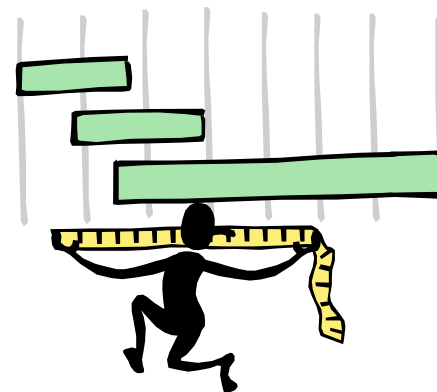
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WHAT ...

WHAT is the level of project performance?

What progress has been made toward project objectives and outputs?





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WHAT ...

Managers will look at:

- Simple descriptive data
- Trends over time
- Comparisons (across project components and sites)





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WHAT ...

Managers will try to understand:

- Direction of change
- Degree of change (how much)
- Pace of change (accelerating or decelerating)





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WHAT ...

First Collect and Organize Data

- To begin, data from the tracking table (and described in the M&E Plan) should be used.
- If necessary, construct a database or spreadsheet to assist with analysis



Annual Data – Current Data Summary Table

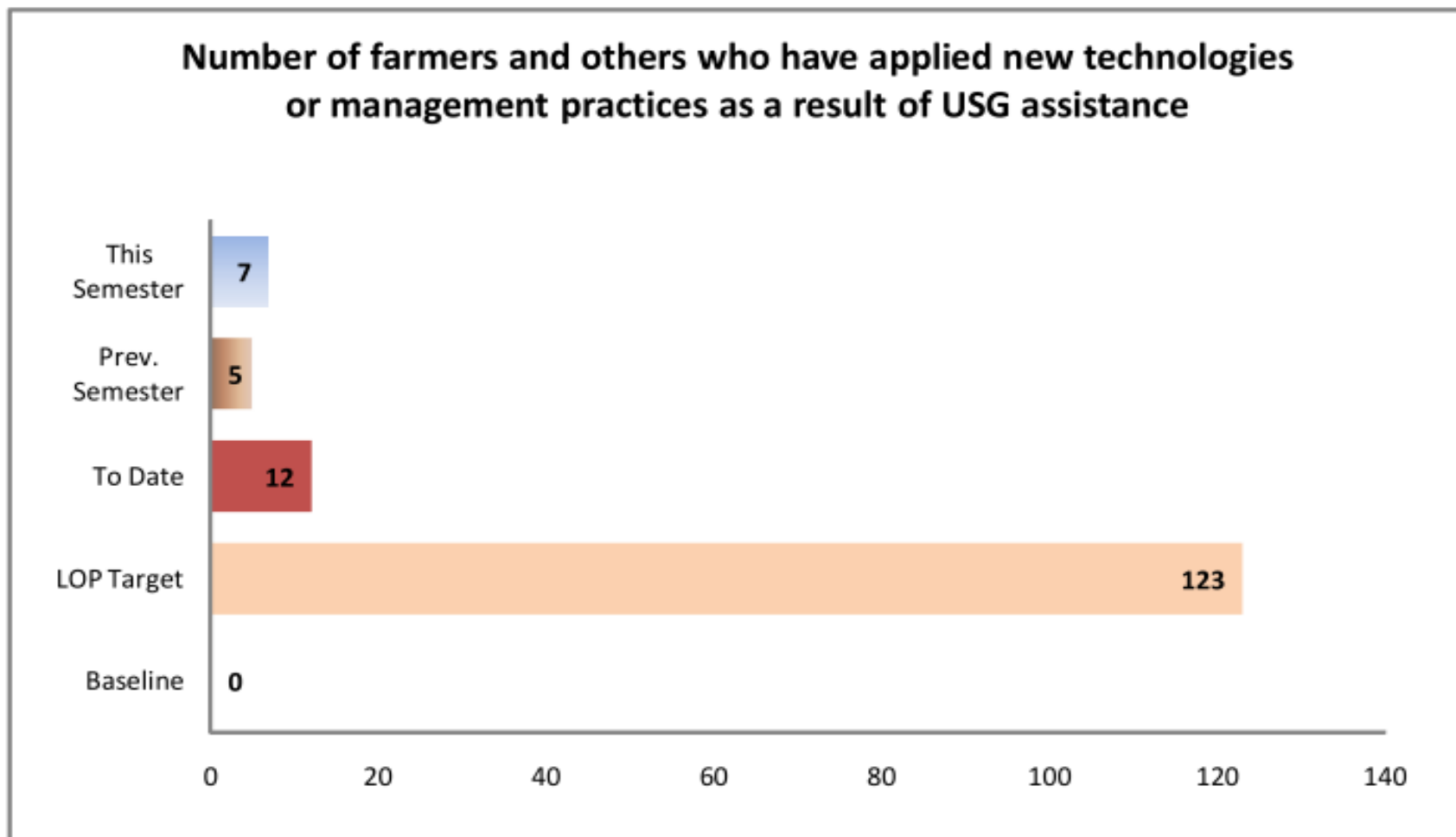
Indicator Code	Indicator Name	Baseline	Target 2012	Actual 2012	Performance %	Target 2013	Target 2014	Target 2015
4.5.2.11;	Number of food security private enterprises (for profit), producers organizations, water users associations, women's groups, trade and business associations, and community-based organizations (CBOs) receiving USG assistance	1,805	2,020	2,330	115%	2,455	2,505	2,530
4.5-2;	Number of jobs attributed to FTF implementation		10,042	8,500	85%	12,618	12,726	12,774
4.5.2-5;	Number of farmers and others who have applied new technologies or management practices as a result of USG assistance		18,594	21,012	113%	21,170	21,278	21,326
4.5.2-38;	Value of new private sector investment in the agriculture sector or food chain leveraged by FTF implementation		11,000	12,000	109%	784	485	7,898
4.5.2-43;	Number of firms (excluding farms) or Civil Society Organizations (CSOs) engaged in agricultural and food security-related manufacturing and services now operating more profitably (at or above cost) because of USG assistance		12,589	12,698	101%	12,879	45,895	36,595
4.5-4;	Gross margin per unit of land, kilogram, or animal of selected product	26,739	32,614	29,064	89%	29,514	29,964	30,464



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Semi-Annual Review – Data Presentation





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WHAT ...

Then Conduct Initial Analyses

“Snapshot” (Single Point)

of new business starts
(total for all project communities)

Current Semester

40

Two Point

of new business starts
(total for all project communities)

Baseline

7

Year 3

50



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WHAT ...

Conduct Initial Analyses

Frequency Table

of firms that have increased net revenue, by project community

Class Interval	f	Cumulative f	Cumulative proportion	Cumulative percent
0-4	1	1	.025	2.5
5-9	7	8	.25	25
10-14	9	17	.425	43
15-19	10	27	.675	68
20-24	6	33	.825	83
25-29	3	36	.90	90
30-34	2	38	.95	95
35-39	1	39	.975	98
>40	1	40	1.00	100



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WHAT ...

Conduct Initial Analyses

Trend Analysis:

- How does performance compare with last year?
- What is the trend from the baseline year? Is performance accelerating or slowing?

Remember, trend analysis requires time series data, i.e. data that are comparable over time.



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WHAT ...

Conduct Initial Analyses - Trends

Rates of Change

	<u>Yr 1</u>	<u>Yr 2</u>	<u>Annual Rate of Change</u>
# of firms using new production techniques	10	12	20%

	<u>Yr 1</u>	<u>Yr 2</u>	<u>Yr 3</u>	<u>Yr 4</u>	<u>Average Annual Rate of Change</u>
# of firms using new production techniques	10	12	16	24	34%



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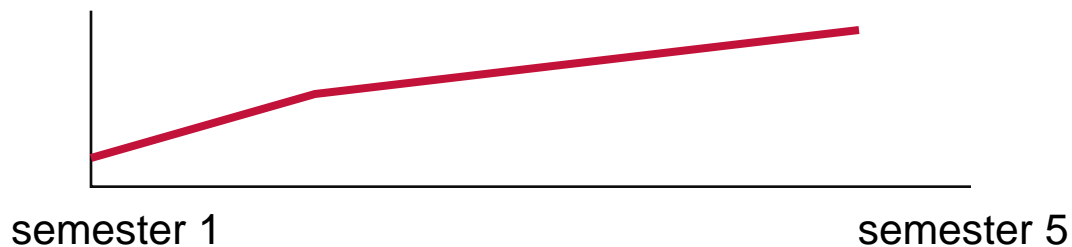
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WHAT ...

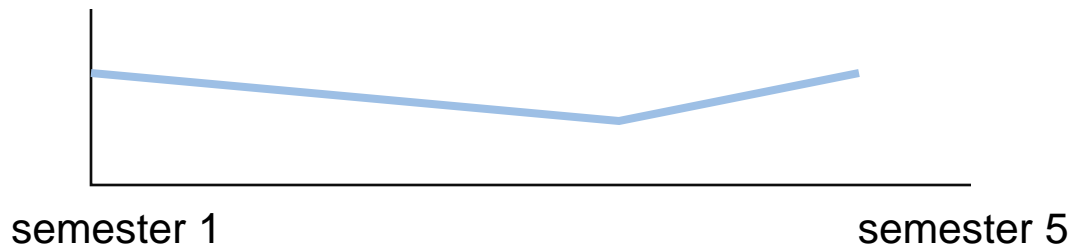
Conduct Initial Analyses - Trends

Simple Graphs

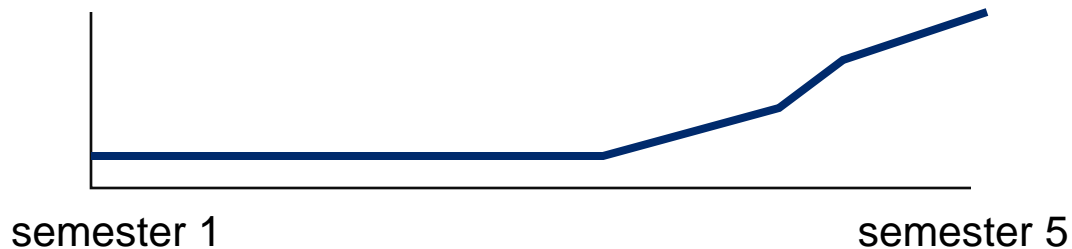
of new job placements



average cost per job created



of new projects funded





WHAT ...

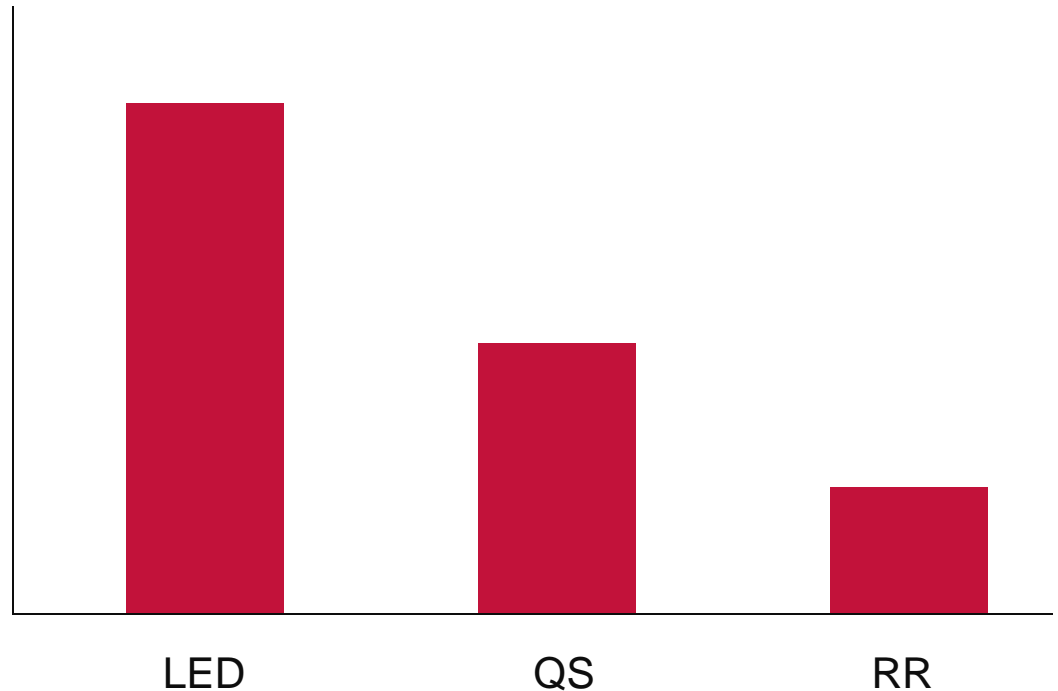
Conduct Initial Analyses - Comparisons

Compare across Project Components

of jobs created
or saved
(current year)



Comparative Analysis requires comparable data across categories.





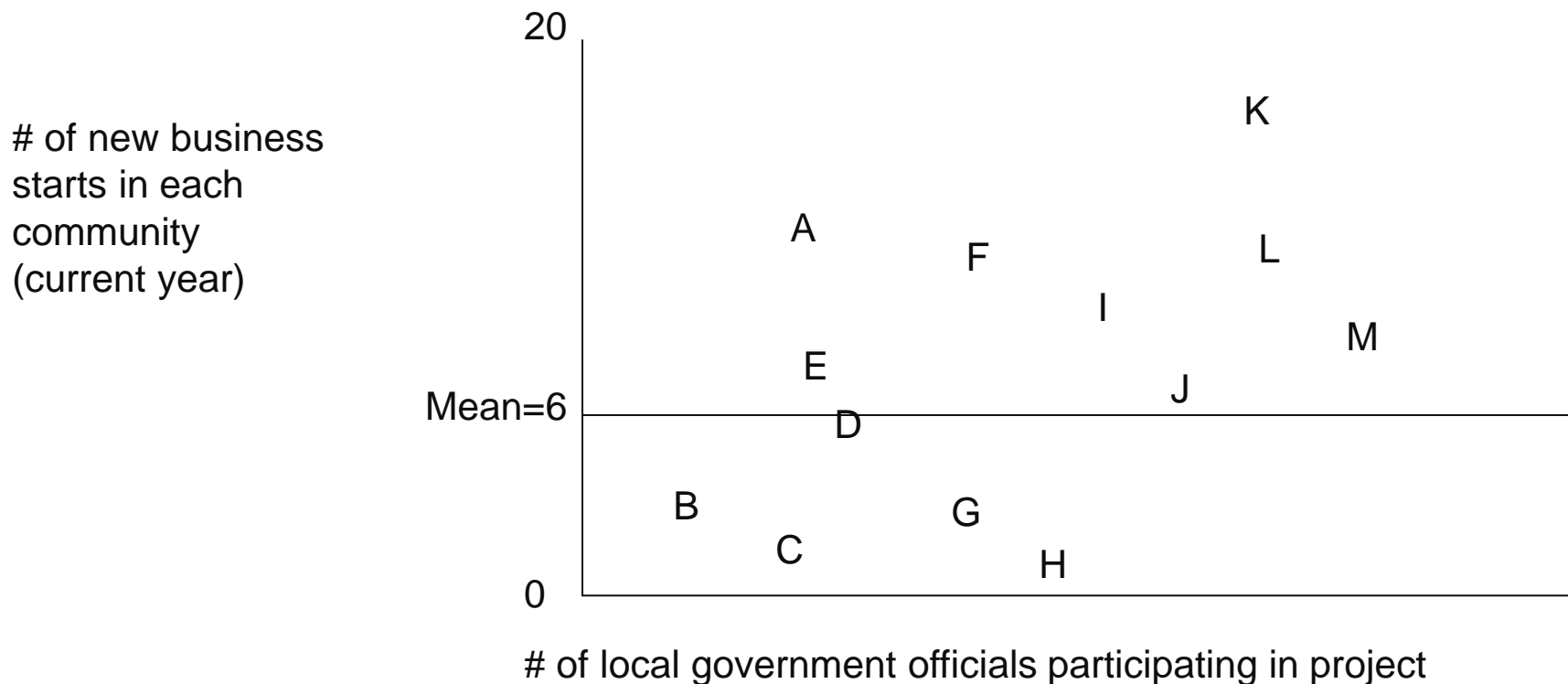
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WHAT ...

Conduct Initial Analyses - Comparisons

Compare across project sites/communities (against a mean)





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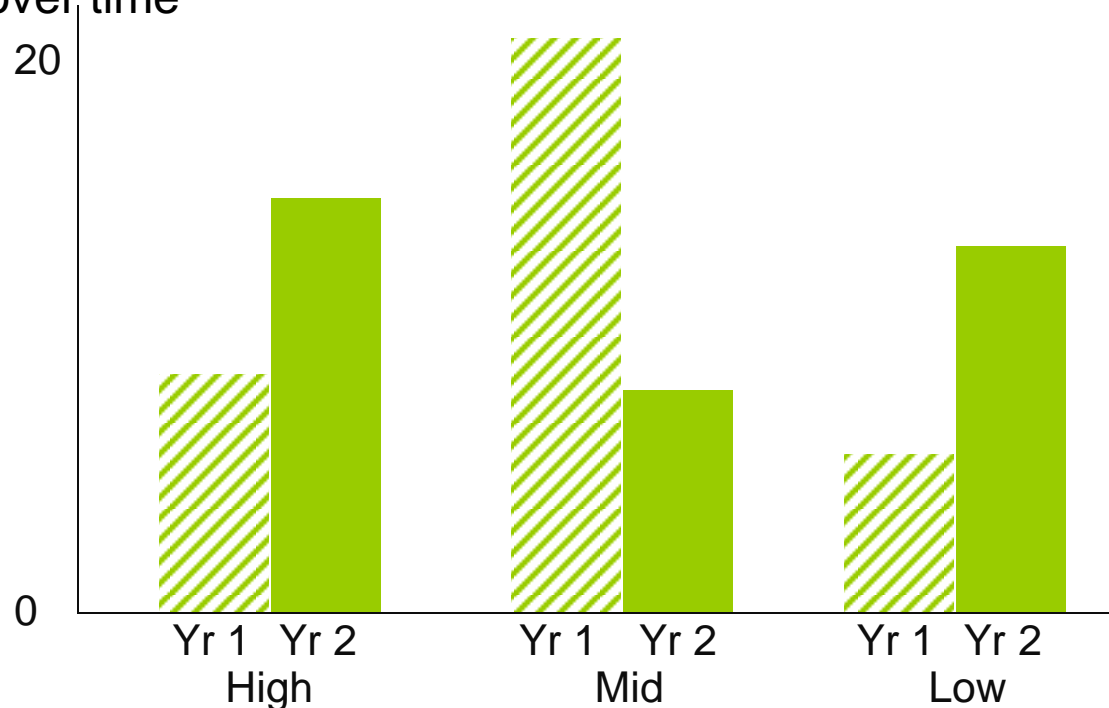
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WHAT ...

Conduct Initial Analyses - Comparisons

Compare performance over time

of project sites,
by performance
category



High = 40 or more jobs created/saved.

Mid = 20-39 jobs created/saved

Low = 0-19 jobs created/saved



Draw Some Preliminary Conclusions...





HOW does performance compare to expectations?

How do project achievements and accomplishments compare to what we expected to observe?





HOW ...

Why do we care about expected performance?



- The movement of indicators in a “positive direction” does not necessarily mean the project is performing well.

10 new jobs created

but

project expected 30 new jobs to be created

performance



performance





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HOW ...

Many of the techniques presented earlier can be used to compare actual and expected performance...



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HOW ...

Conduct Initial Analysis

“Snapshot”

	<u>expected</u>	<u>actual</u>	<u>difference</u>	<u>percent</u>
# of assisted firms with increased net revenue	250	200	50	-20%
# of new business starts	30	39	9	+30%



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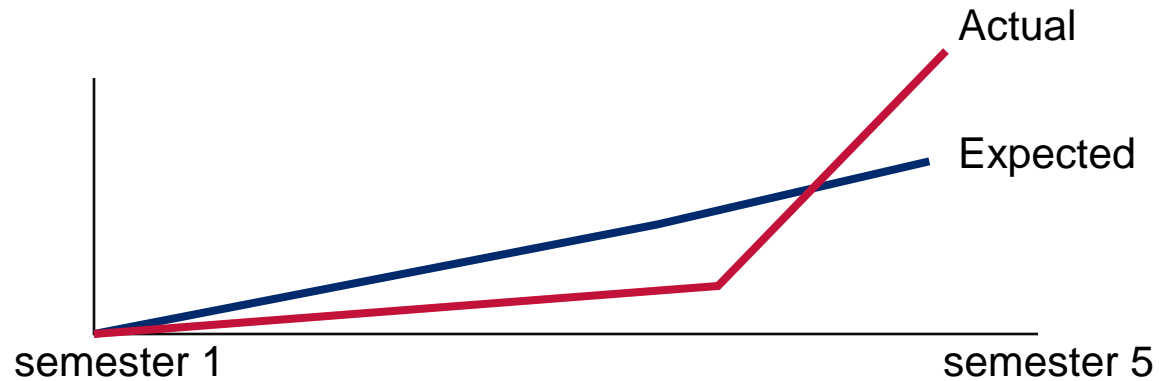
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HOW ...

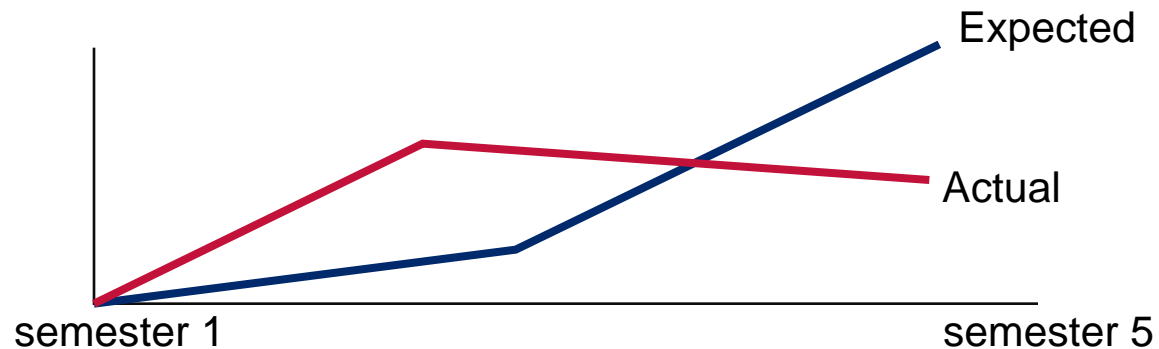
Conduct Initial Analysis

Simple Graphs

of economic development plans that are operational



of local “business climate” improvements





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Draw Additional Preliminary Conclusions

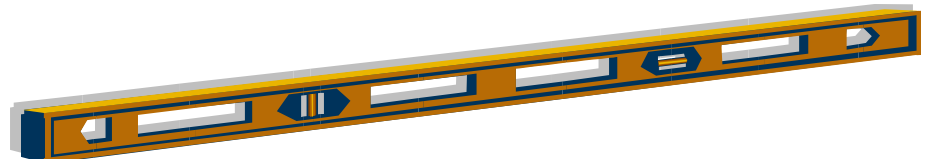
If project performance is on track – neither substantially above or below expectations – there may be no need to conduct further analyses.



WHY is the Project Performing Above or Below Expectations?

What have been the causes of the level of project performance that we have observed (from the first two steps)?

- E.G Why is the number of new jobs created (10) below what was expected (30) ?
- What assumptions had been made in setting this target?
- Were there any delays in implementation compared to what had been planned?
- Did the context change?

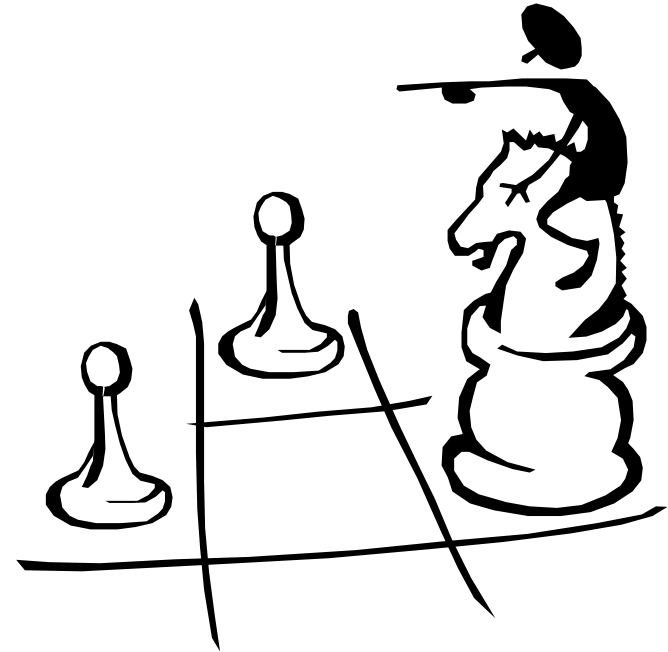




WHY ...

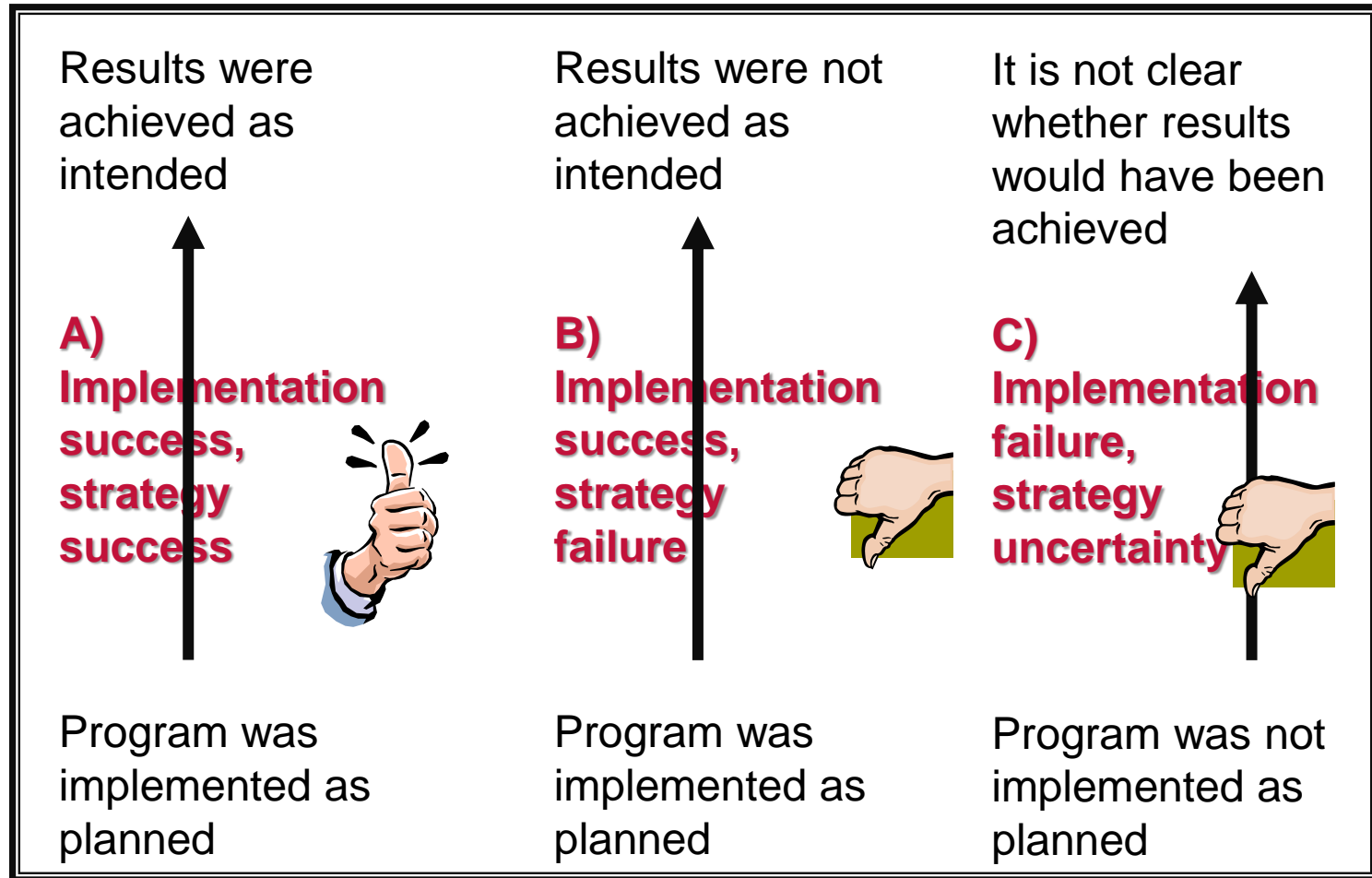
If project performance is inadequate, or well beyond expectation, analysis explores two areas of explanation:

- Strategy
- Implementation





RULE OF THUMB





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WHY ...

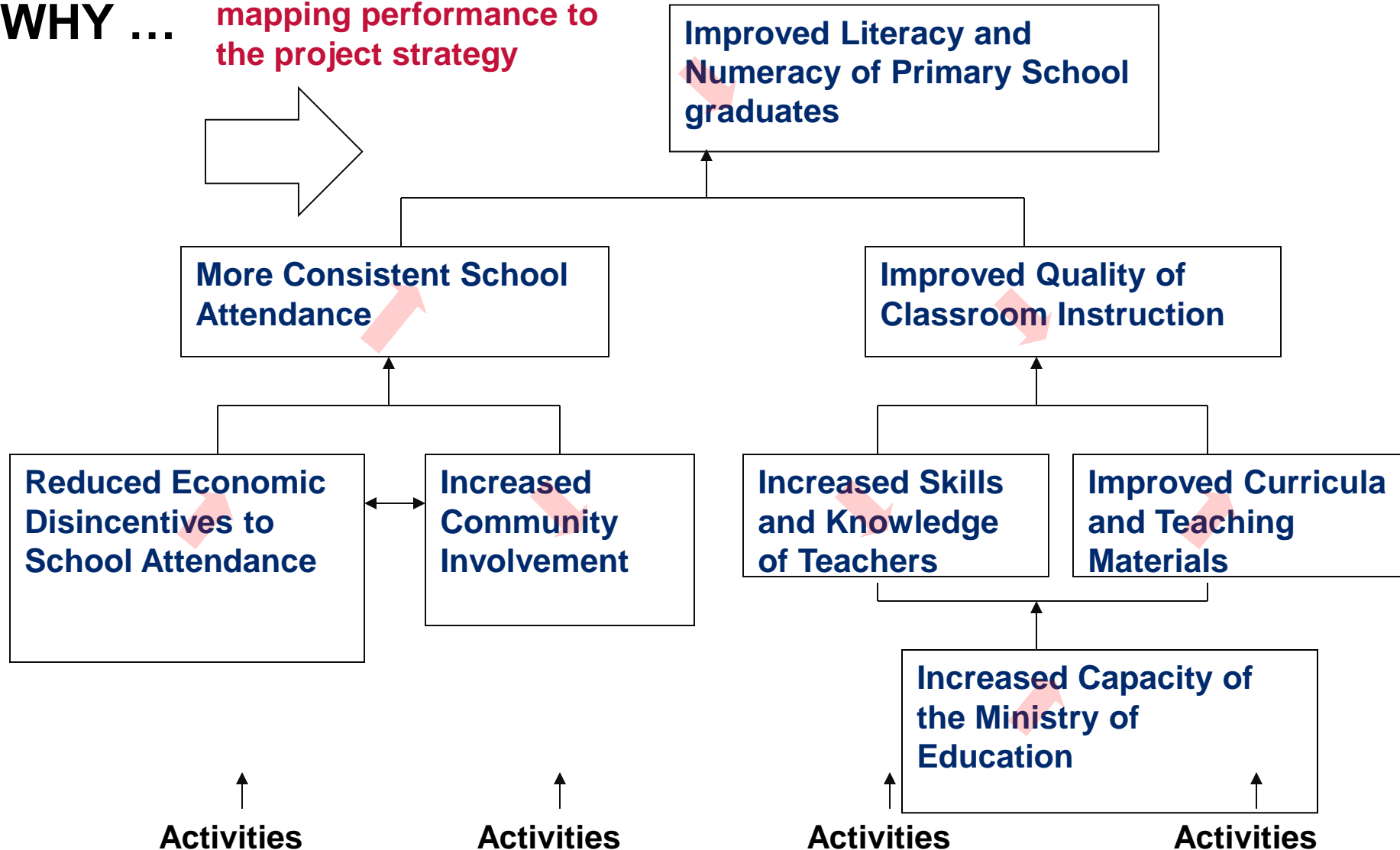
Conduct Initial Analysis

There are many possible factors to look at when trying to answer the question of why a project is performing at its current level.

- Start by placing performance data within the context of the project strategy.



WHY ... mapping performance to the project strategy





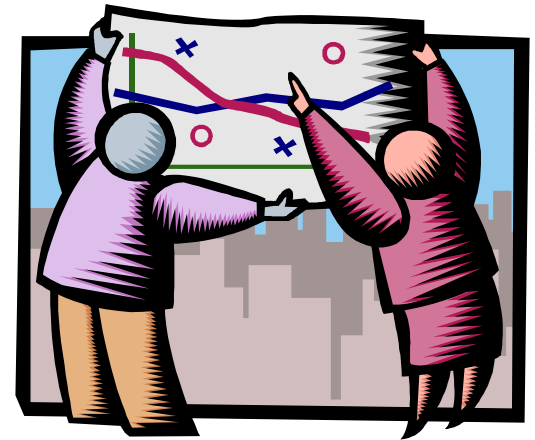
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WHY ...

Conduct Initial Analysis

Review questions and issues related to project strategy:



- Are Sub-IRs contributing to the progress of IRs? Are IRs contributing to the achievement of the DO? **(causal links)**
- Is the strategy missing important elements?
- Are critical assumptions holding? Have new/unexpected external factors emerged?
- Do we need more information?



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WHY ...

We've looked at performance within the context of the project strategy; now let's consider project activities...



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WHY ...

Conduct Initial Analysis

Review questions and issues related to project activities and implementation:

- Are key activities on track (quantity and time)?
- Is the quality of activities adequate?
- Are the activities producing the expected level of outputs – and do those outputs appear to support related sub-IRs and IRs.
- Do we need more information?

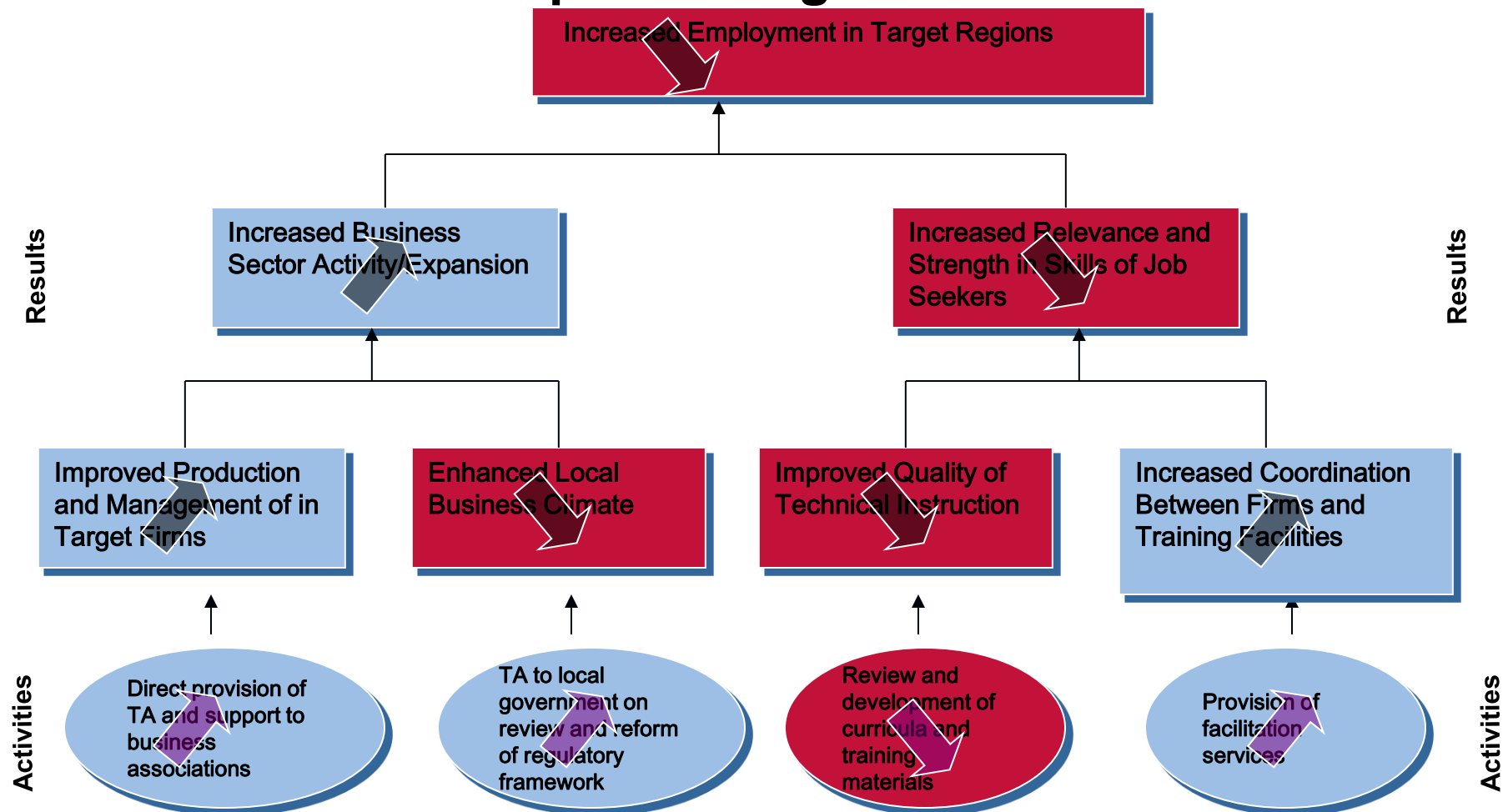




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WHY – are some non-performing?



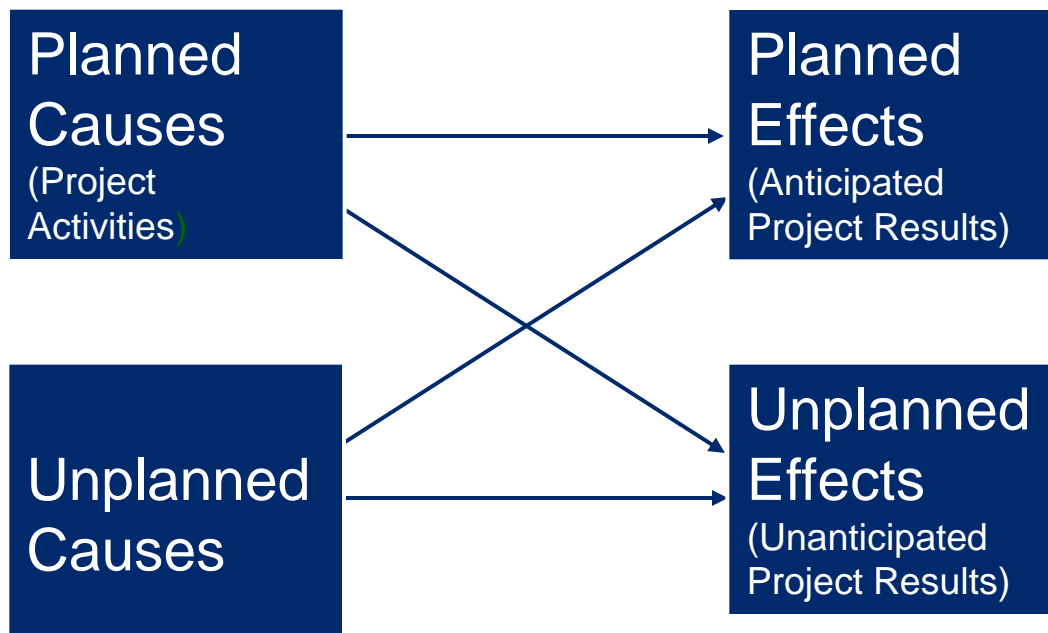


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WHY ...

Another way to think about answering the question why?





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Draw Conclusions and Identify New or Emerging **Management Questions...**



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If Necessary, Collect and/or Analyze New or Additional Data and Information

Why Collect or Analyze More Data?

- Monitoring systems are designed primarily to answer questions about “**what happened**” and “**how**” actual performance compares to expected performance.
- **Monitoring systems** are NOT designed to fully answer the question “why.”
- Monitoring data can help, but **supplementary data** are frequently required for this type of analysis.

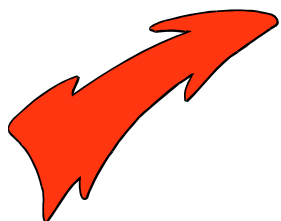


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Possible Sources of Supplementary Data Include...

- Existing project data – quantitative or qualitative
- Existing partner data
- New data collection and **evaluation** activities



Data may come from site visits, household surveys, key informant interviews, structured observation, public opinion surveys, expert panels, focus groups, informal conversations, etc.



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WHY ...

We use supplementary data – often collected through evaluation activities - to further explore the question of “Why” is the project performing above or below expectations...



WHY ...

Conduct “Detailed” Analysis - Crosstabs

Supplementary Data:

- Assume a community survey was conducted at each project site

Level of “Community Empowerment”

Job Creation	High	Medium	Low	Total
High (>40 jobs)	7	7	1	15
Medium (20-34 jobs)	4	8	2	14
Low (0-19 jobs)	1	5	5	11
Total	12	20	8	40



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Analysis is Complete

Draw Final Conclusions



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NOW WHAT...

NOW WHAT **decisions** should we make?



Based on the findings and conclusions that derive from our preceding analysis, what actions, if any, should we take?



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NOW WHAT...

Our analysis, best shared during regular management reviews should allow consideration of the following as we explore the answer to “Now What...”

- Past year’s progress and expectations for future progress
- Evidence that activities contribute to results
- Status of critical assumptions and causal relationships
- Status and timeliness of input mobilization
- Adequacy of inputs and efficiency of activities
- Pipeline levels and future resource requirements
- Vulnerability issues



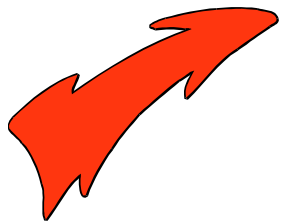
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NOW WHAT...

Consider the full set of options:

- Look at advantages and disadvantages of each alternative
- Compare options to each other
- Consider additional constraints and opportunities (funding, timeframe, staffing, partners, etc.)



Must assess and balance trade offs

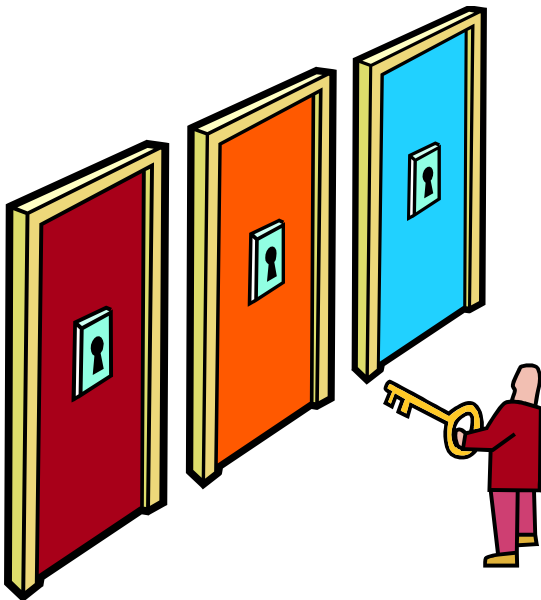
And...



NOW WHAT...

Make your decisions:

- **Modify strategic approach & framework**
- **Adjust implementation plan – add, drop or adjust specific activities**





HOW do we put our decisions in place?

Once we have made decisions about adjustments and changes, what specific tasks and actions are required?

- **adjust workplan,**
- **modify partner agreements,**
- **make staffing changes, etc., etc.**
- **shift resources where necessary**



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Why do we care about Data Analysis?

EFFECTIVE PROJECT



Make Good Decisions



Outline Recommendations



Draw Valid Conclusions



Conduct Good Analysis



Collect Good Data



Effective use of M&E information for improved decision-making requires...

- 1) **A formal project review process** (strategy and implementation) that includes reviews at appropriate time intervals, and...
- 2) **Project leadership and culture that supports learning** (learn and improve...learn and improve...)